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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/796,498	03/09/2004	Tommy Taylor	1.908.20	3021
7590		05/18/2007		
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			EXAMINER	
			BROOKS, KRISTIE LATRICE	
			ART UNIT	PAPER NUMBER
			1609	
			MAIL DATE	DELIVERY MODE
			05/18/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/796,498

Applicant(s)

TAYLOR, TOMMY

Examiner

Kristie L. Brooks

Art Unit

1609

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 January 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☒ Claim(s) 4 and 10-19 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application
- ☐ Other: _____

DETAILED ACTION

Status of Application

1. Claims 1-6 and 10-19 are pending.

Specification

2. The abstract of the disclosure is objected to because it is not descriptive enough of the invention and the abstract should be between 50-150 words in length. Correction is required. See MPEP § 608.01(b).

Claim Objections

3. The numbering of claims is not in accordance with 37 CFR 1.126 which requires the original numbering of the claims to be preserved throughout the prosecution. When claims are canceled, the remaining claims must not be renumbered. When new claims are presented, they must be numbered consecutively beginning with the number next following the highest numbered claims previously presented (whether entered or not).

Misnumbered claims 10-19 have been renumbered 7-16.

4. Claim 4 is objected to because of the following informalities: improper Markush language. Proper Markush language does not consist of a colon after the phrase "selected from the group consisting of". Examiner suggests deleting the colon after the phrase "selected from the group consisting of".

Appropriate correction is required.

5. Claim 4 is objected to because of the following informalities: typographical error. The word --- and--- should be inserted between “f) polyhydric alcohols;” and “g) lower alkyl mono-and di-ethers derived from alkylene glycols.”

Appropriate correction is required.

6. Claim 10 is objected to because of the following informalities: improper Markush language. Proper Markush language does not consist of a colon after the phrase “selected from the group consisting of”. Examiner suggests deleting the colon after the phrase “selected from the group consisting of”.

Appropriate correction is required.

Claim Rejections - 35 USC § 112, 2nd

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. Claim 2 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 2 recites the limitation “trans-dichloroethylene” at the end of the claim. There is insufficient antecedent basis for this limitation in the claim because “trans dichloroethylene” in claim 2 refers back to “trans 1,2-dichloroethylene” in claim 1.

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9. Claim 10 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The claim recites "derivatives of pyrethrins" as a group of insecticides that may be used in the insecticide delivery system. However, it is unclear as to whether the "derivatives of pyrethrins" are structural or functional derivatives and how much derivation is acceptable to maintain activity in the insecticide delivery system. As defined in Merriam-Webster's Collegiate® Dictionary (cited in 892 form), a derivative is a chemical substance related structurally to another substance and theoretically derivable from it, thus rendering "derivatives of pyrethrins" indefinite and unclear.

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

11. Claims 1-5, 7-12, and 15-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Asano et al. (US 5,116,426).

Applicant claims an insecticide delivery system comprising a non-lethal knockout agent such as cis 1,2-dichloroethylene or trans-1,2- dichloroethylene, an insecticide, a diluent, a propellant and an emulsifier.

Determination of the scope and content of the prior art

(MPEP 2141.01)

Asano et al. teach a halogenated hydrocarbon solvent comprising a hydrogen containing chlorofluoropropane incorporated with various other solvents such as an 1,2-dichloroethylene (knockout agent), dipentene (racemic limonene) (insecticide), alcohols (diluent), ketones (diluent), esters (diluent), a propellant, and an emulsifier such as a polyoxyethylene sorbitan ester, as being useful for various purposes such as an insecticide (see the entire article, especially column 2 lines 27-47 and lines 51-67; column 3 lines 13,18, 38 and 67; column 4 lines 4-35; and example 11-1 to 11-51 lines 13-22).

Ascertainment of the difference between the prior art and the claims

(MPEP 2141.02)

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Asano et al. teach 1,2-dichloroethylene, which is a racemic mixture of cis 1,2-dichloroethylene and trans-1,2-dichloroethylene. However, Applicants knockout agent is selected from cis 1,2-dichloroethylene or trans 1,2-dichloroethylene. Asano et al. also teaches the insecticide dipentene, which is the racemic mixture of limonene. Applicant however claims the *d*-limonene isomeric form of dipentene.

Finding of prima facie obviousness

Rational and Motivation (MPEP 2142-2143)

It would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to incorporate cis 1,2-dichloroethylene or trans 1,2-dichloroethylene and *d*-limonene.

One of ordinary skill in the art would have been motivated to do this because Asano et al. suggests the incorporation of 1,2-dichloroethylene, which is the is the racemic mixture of cis 1,2-dichloroethylene and trans 1,2-dichloroethylene. In the absence of unexpected results, one of ordinary skilled in the art would have employed one or all isomeric (cis, trans) forms of 1,2-dichloroethylene in the insecticide system. With respect to *d*-limonene, Asano et al. suggests the use of dipentene (racemic limonene), which contains both the (R)-enantiomer (*d*-limonene) and (S)-enantiomer (*l*-limonene). Thus, the claimed invention would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made because the prior art is fairly suggestive of the claimed invention.

It is noted that the reference does not teach the composition can be used in the manner instantly claimed, insecticide delivery system, however, the intended use of the claimed composition does not patentably distinguish the composition, per se, since such undisclosed use is inherent in the reference composition. In order to be limiting, the intended use must create a structural difference between the claimed composition and the prior art composition. In the instant case, the intended use does not create a structural difference, thus the intended use is not limiting.

12. Claims 1-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Denissenko et al. (US 4,336,024).

Applicant claims an insecticide delivery system comprising a non-lethal knockout agent such as cis 1,2-dichloroethylene or trans-1,2-dichloroethylene, an insecticide, a diluent, and a propellant.

Determination of the scope and content of the prior art

(MPEP 2141.01)

Denissenko et al. teach treating articles of clothing with a cleaning agent comprising at least one organic solvent such as 1,2-dichloroethylene (knockout agent), dipentene (insecticide), an alcoholic solvent (diluent), a ketonic solvent (diluent), an ether (diluent), water (diluent), and non-flammable propellants such as carbon dioxide

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(see the entire article, especially column 1 lines 48-51; column 2 lines 31-44; column 3 lines 26-57; column 4 lines 18-67; column 5 lines 1-19; column 6 lines 20-29).

Ascertainment of the difference between the prior art and the claims

(MPEP 2141.02)

Denissenko et al. teach 1,2-dichloroethylene, which is a racemic mixture of cis 1,2- dichloroethylene and trans-1,2- dichloroethylene. However, Applicants knockout agent is selected from cis 1,2-dichloroethylene or trans 1,2-dichlororethylene.

Denissenko et al. also teaches the insecticide dipentene, which is the racemic mixture of limonene. Applicant however, claims the *d*-limonene isomeric form of dipentene.

Finding of prima facie obviousness

Rational and Motivation (MPEP 2142-2143)

It would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to incorporate all isomeric forms of 1,2-dichloroethylene and *d*-limonene.

One of ordinary skill in the art would have been motivated to do this because Denissenko et al. suggest the incorporation of 1,2-dichloroethylene, which is the is the racemic mixture of cis 1,2-dichloroethylene and trans 1,2-dichloroethylene. In the absence of unexpected results, one of ordinary skilled in the art would have employed one or all isomeric (cis, trans) forms of 1,2-dichloroethylene in the insecticide system.

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With respect to *d*-limonene, Denissenko et al. suggests the use of dipentene (racemic limonene), which contains both the (R)-enantiomer (*d*-limonene) and (S)-enantiomer (*l*-limonene). Thus, the claimed invention would have been *prima facie* obvious to one of ordinary skill in the art at the time the invention was made because the prior art is fairly suggestive of the claimed invention.

It is noted that the reference does not teach the composition can be used in the manner instantly claimed, i.e. an insecticide delivery system. However, the intended use of the claimed composition does not patentably distinguish the composition *per se*, since such undisclosed use is inherent in the referenced composition. In order to be limiting, the intended use must create a structural difference between the claimed composition and the prior art composition. In the instant case, the intended use does not create a structural difference, thus the intended use is not limiting.

13. Claims 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Denissenko et al. (US 4,336,024) in view of Shiflett (US 5,185,094).

Applicant claims an insecticide delivery system comprising a non-lethal knockout agent such as *cis* 1,2-dichloroethylene or *trans*-1,2- dichloroethylene, an insecticide, and a propellant such as tetrafluoroethane.

Determination of the scope and content of the prior art

(MPEP 2141.01)

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Denissenko et al. teach treating articles of clothing with a cleaning agent comprising at least one organic solvent such as 1,2-dichloroethylene (knockout agent), dipentene (insecticide), an alcoholic solvent (diluent), a ketonic solvent (diluent), an ether (diluent), water (diluent), and propellants such as carbon dioxide (see the entire article, especially column 1 lines 48-51; column 2 lines 31-44; column 3 lines 26-57; column 4 lines 18-67; column 5 lines 1-19; column 6 lines 20-29). Where the cleaning agent may be applied in any manner such as by spraying using an aerosol container (see the entire article, especially column 6 lined 13-29).

Shiflett teaches compositions comprising tetrafluorethane (i.e. 1,1,1,2-tetrafluoroethane or 1,1,2,2-tetrafluoroethane or mixtures thereof) and difluoromethane are useful as cleaning agents and aerosol propellants (see the entire article, especially column 1 lines 13-26; column 2 lines 8-10; column 3 lines 1-18).

Ascertainment of the difference between the prior art and the claims
(MPEP 2141.02)

The difference between Denissenko et al. and the claimed invention is that Denissenko et al. teach the use of carbon dioxide as the propellant whereas Applicant uses tetrafluorethane as the propellant.

Finding of prima facie obviousness

Rational and Motivation (MPEP 2142-2143)

It would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to incorporate tetrafluoroethane as a propellant.

One of ordinary skill in the art would have been motivated to incorporate tetrafluoroethane as a propellant because Denissenko et al. suggest 1,2-dichloroethylene, an insecticide and a propellant in a cleaning agent. Compositions comprising tetrafluoroethane can be used as cleaning agents and aerosol propellants as suggested by Shiflett and one of ordinary skill in the art would be motivated to use tetrafluoroethane because it is an obvious variation of propellants that may be used within compositions useful as cleaning agents. Thus, the claimed invention would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made because the prior art is fairly suggestive of the claimed invention.

It is noted that the reference does not teach the composition can be used in the manner instantly claimed, i.e. an insecticide delivery system. However, the intended use of the claimed composition does not patentably distinguish the composition per se, since such undisclosed use is inherent in the referenced composition. In order to be limiting, the intended use must create a structural difference between the claimed composition and the prior art composition. In the instant case, the intended use does not create a structural difference, thus the intended use is not limiting.

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A reference is good not only for what it teaches by direct anticipation but also for what one of ordinary skill in the art might reasonably infer from the teachings. (*In re Opprecht* 12 USPQ 2d 1235, 1236 (Fed Cir. 1989); *In re Bode* 193 USPQ 12 (CCPA) 1976).

In light of the forgoing discussion, the Examiner concludes that the subject matter defined by the instant claims would have been obvious within the meaning of 35 USC 103(a).

From the teachings of the references, it is apparent that one of ordinary skill in the art would have had a reasonable expectation of success in producing the claimed invention. Therefore, the invention as a whole was *prima facie* obvious to one of ordinary skill in the art at the time the invention was made, as evidenced by the references, especially in the absence of evidence to the contrary.

Conclusion

14. No claims are allowed.

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kristie L. Brooks whose telephone number is (571) 272-9072. The examiner can normally be reached on M-F 8:00am-5:30pm Est..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cecilia Tsang can be reached on (571) 272-1600. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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